

# Data Appendix to “Stock Buybacks and Corporate Cashouts: An update”

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## Sample Construction

Data on buyback announcement dates come from Thomson Reuters’ SDC database. Insider trading activity comes from Thomson Reuters’ Insiders database, which is collected from Table 1 of SEC Form 4s. We restrict our sample of insider trades to trades made by top officers and directors including the CEO, CFO, COO, Chair of the Board, and members of Board Committees, etc. Earnings announcement dates come from the COMPUSTAT Quarterly Fundamentals database, which collects earnings announcement dates from various sources including newswires. Firm accounting information comes from the COMPUSTAT Annual Fundamentals database. Stock price and shares outstanding data is collected from the CRSP database.

In our analysis we only use common stocks listed on NYSE, Nasdaq, and NYSE American. Our sample begins in 2004, which is the last time the Commission updated its rules on buybacks. In the Response we focus on the more recent 2017–2018 sample. In this Appendix we focus on the full sample from 2004–2018, except where otherwise noted.

Bettis et al. (2000) study insider trading policies, and determine that most firms permit trading in the period 3–12 days after quarterly earnings announcements. We exclude all buyback announcements that occur within 12 days of an earnings announcement to account for selling that may occur after earnings blackout periods end.

Lee et al. (1992) study corporate insider trading prior to buyback announcements. Consistent with their findings, we find that insiders trade up to the day before the announcement. Specifically, for each buyback announcement we look for the last day in which an insider traded. The mode is -1, the day before the announcement, the median is -8, and the mean is -10. Therefore, despite the variation in the data, there does not appear to be a well-defined blackout period for insider trading prior to buybacks.

Cohen et al. (2012) develop an algorithm for classifying insider trades as “routine” or “opportunistic.” The authors show that opportunistic insider

trades predict abnormal returns, information events, and regulator actions which is consistent with the presence of private information. In order to classify a given trade, we require at least three years of consecutive insider trades. A trader makes a routine trade if he/she placed a trade in the same calendar month for at least three years in the past. We exclude all trades classified as routine.

We use cumulative abnormal returns based on the Fama and French (1993) plus Carhart (1997) momentum benchmark four-factor model. Because characteristics such as size, value, and momentum are also correlated with stock returns (Daniel and Titman, 1997), we match firms based on pre-announcement cumulative abnormal returns, size, and book-to-market.

## Results

Figure 1 shows that selling activity picks up around buyback announcements. On average, the a buyback announcement has nearly 20,000 shares sold on the announcement day. Selling activity is higher up to ten days after the announcement—we call these first ten days the “buybacks trading window.”

Figure 2 plots daily cumulative abnormal returns around buyback announcements. Figure 2 plots returns for the full sample, and reveals three stylized facts:

1. Buyback are typically announced after a period of abnormally low stock performance (-4% cumulative abnormal return over the previous 30 days).
2. Buyback announcements boost stock prices.
3. Stock performance gradually improves after the buyback announcement over the next 30 days, but remains net negative.

Figure 3 splits the sample based on whether, and how much corporate insiders sell over the buybacks trading window  $[0,+10]$ . The three groups are no selling (green), below-median selling (blue), and above-median selling (purple).

Figure 4 repeats the analysis from Figure 3, except that we match firms in the no- and below-median selling groups to firms in the above-median selling group based on pre-announcement cumulative abnormal returns, size,

and book-to-market. Hence, the only difference is the amount of selling that insiders conduct. We use the Coarsened Exact Matching algorithm from Iacus et al. (2012), and ensure that our standardized mean differences are below 4%.

In the no-selling group (green) we observe approximately the same pattern as in the full sample: stock performance is poor prior to the announcement, the buyback announcement boosts the stock price, and stock performance gradually improves. However, when insiders sell the pattern is different. For the group of firms with some corporate insider selling (blue; below median net selling activity), there is a stock price pop, but no subsequent increase in stock prices. For the group of firms with high selling activity (purple; above median net selling), after about 60 days the stock actually begins to underperform. A year later, the group with above median insider selling underperforms relative to the group with below no insider selling by over 3%—wiping away any gains from the larger initial positive buyback announcement effect.

Table 1 presents results from regressions of net selling in the buyback window on net selling, and total trading in the pre-announcement window  $[-30,-1]$  for the 2017–2018 sample. Column (1) has no controls, and is therefore just an estimate of the average net dollar shares sold in the buybacks window. The point estimate is \$5,066,847, which is statistically significant with a p-value of 0.015. If there is pent-up demand for selling, then there should be a negative and significant coefficient on pre-announcement trading activity. Columns (2) and (3) show that this is not the case. In fact, pre-announcement trading has no effect on post-announcement trading.

## References

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## Tables and Figures

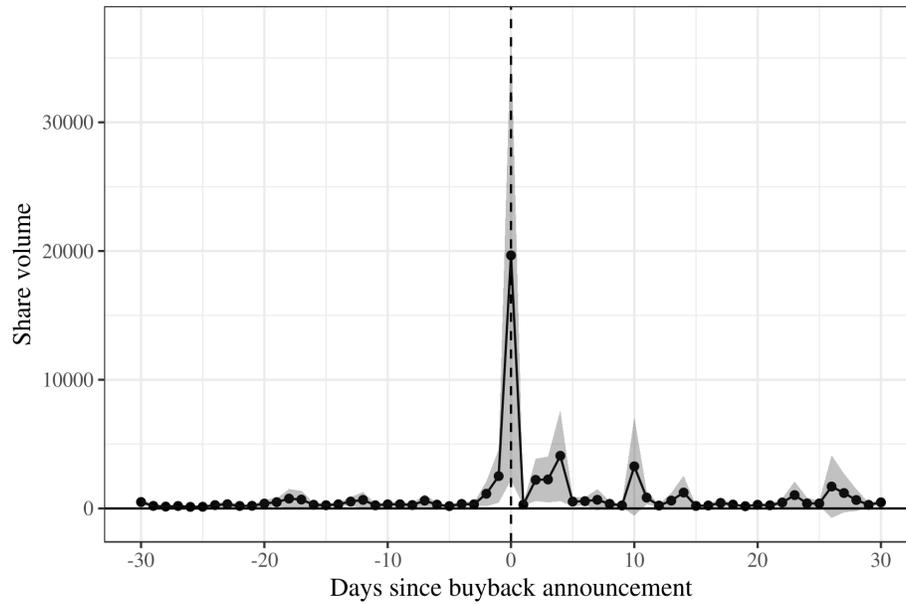


Figure 1: Average shares sold around buyback announcements. The shaded region indicates a 90% confidence interval.

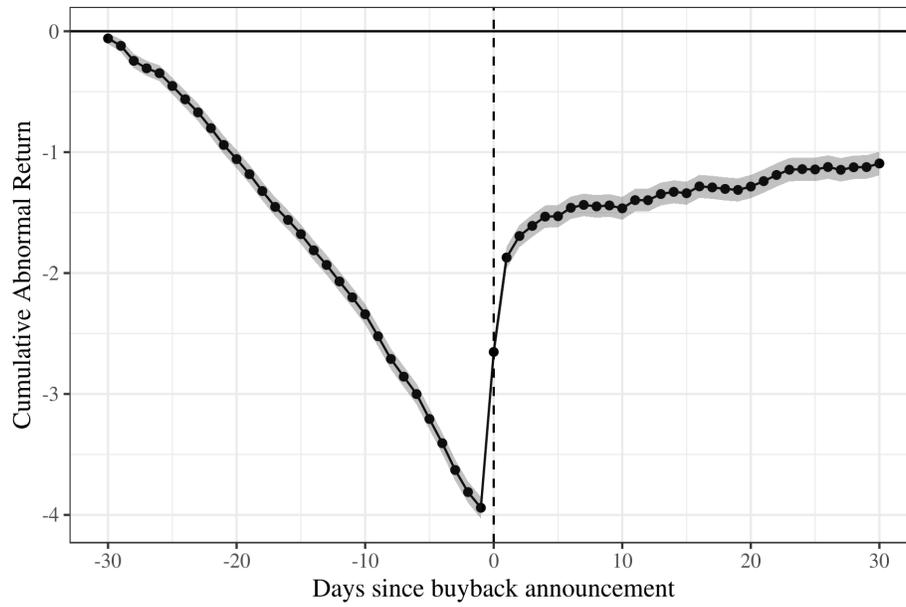


Figure 2: Cumulative daily abnormal returns around buyback announcements. The shaded region indicates a 95% confidence interval.

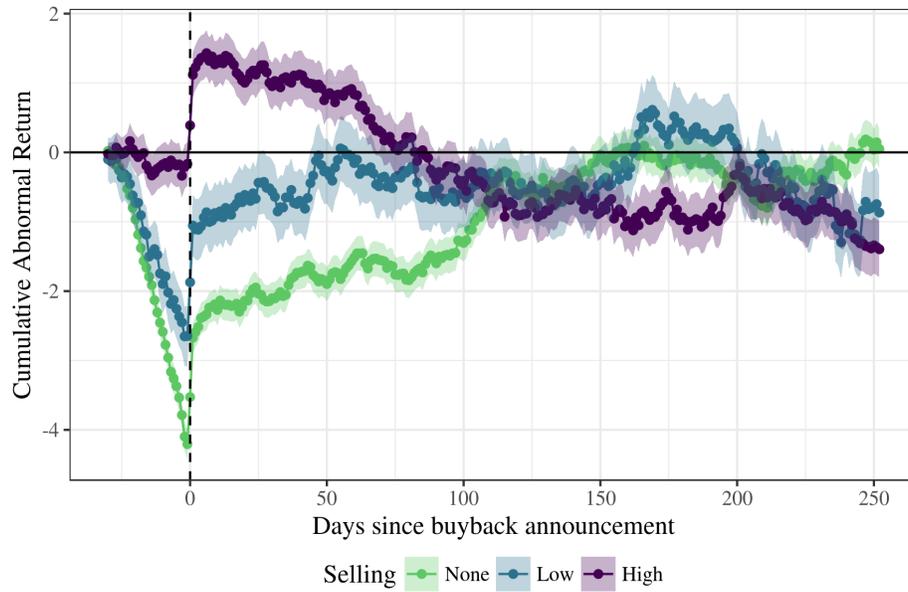


Figure 3: Cumulative daily abnormal returns around buyback announcements based on corporate insider selling activity. The shaded regions indicate 95% confidence intervals.

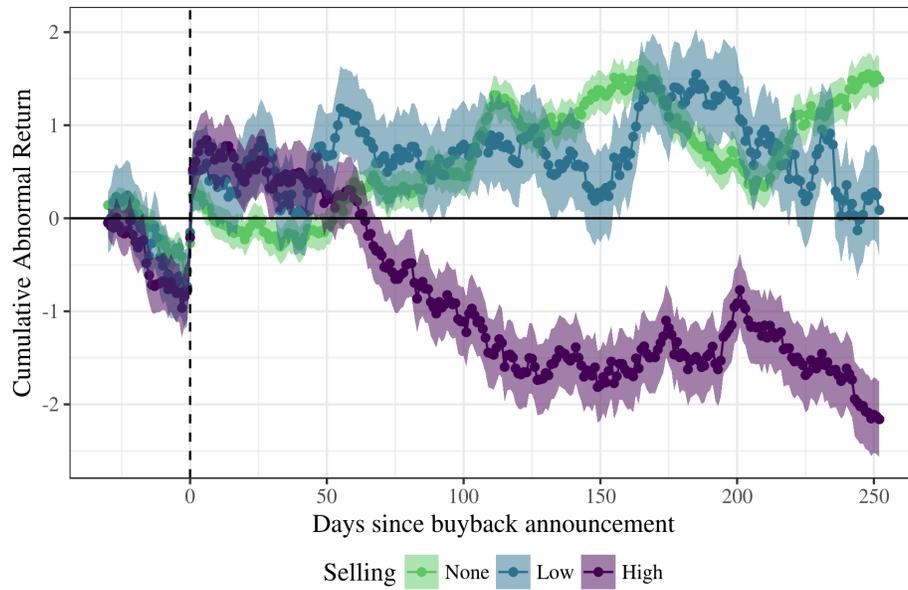


Figure 4: Cumulative daily abnormal returns around buyback announcements based on corporate insider selling activity (matched sample). The shaded regions indicate 95% confidence intervals.

Table 1: Pent-up demand for insider selling into buyback announcements (2017–2018).

	(1)	(2)	(3)
Net Selling Pre (\$)		0.036 p = 0.544	
Total Volume Pre (\$)			0.033 p = 0.535
Net Selling Post (\$)	5,066,847.000** p = 0.015	5,010,010.000** p = 0.014	4,967,586.000** p = 0.013
Observations	614	614	614
R <sup>2</sup>	0.000	0.0002	0.0002
<i>Note:</i>		*p<0.1; **p<0.05; ***p<0.01	